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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/875,151	06/07/2001	Toshifumi Sato	Q64872	7262

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SUGHRUE, MION, ZINN, MACPEAK & SEAS
2100 Pennsylvania Avenue, N.W.
Washington, DC 20037

EXAMINER

BURD, KEVIN MICHAEL

ART UNIT PAPER NUMBER

2631

DATE MAILED: 04/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/875,151

Applicant(s)

SATO, TOSHIFUMI

Examiner

Kevin M. Burd

Art Unit

2631

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 January 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 June 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 1/04/5/03/6/01.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

2. The information disclosure statement (IDS) submitted on 6/7/2001; 5/7/2003 and 1/16/2004 are being considered by the examiner.

Specification

3. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and

Art Unit: 2631

the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1, 3 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kanda et al (US 5,060,515) in view of Hofmann (WO 00/01099). Hofmann (US 2001/0005176 A1) is used as a translation of WO 00/01099.

Regarding claim 1, Kanda discloses a communication system comprising a frame correlation circuit that calculates a frame correlation coefficient (column 1, lines 40-46). A difference is detected according to the correlation and the difference data is input to an averaging means (column 7, lines 49-64 and figure 7). After calculating the average, an output means outputs a coefficient corresponding to the maximum average value (peak) (column 7, lines 65-68). Additional information is found in column 5, lines 26-63. Kanda discloses the system uses an ultrasonic transmitter/receiver circuit (abstract). Kanda does not disclose the circuit uses CDMA signals to communicate. Hofmann discloses an ultrasonic transmission system where digital information is spread to great bandwidth with a CDMA technique (abstract). The CDMA ultrasonic system is capable of transmitting at higher data rates by eliminating echoes and other sources of interference (paragraph 0009). For this reason, it would have been obvious for one of ordinary skill in the art at the time of the invention to utilize the transmission system of Kanda using CDMA signals as stated by Hofmann.

Regarding claim 3, the averaging circuit uses the same time value for each averaging step (column 5, lines 48-63).

Regarding claim 4, the values are compared to one another to determine which value is the maximum value.

Art Unit: 2631

5. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kanda et al (US 5,060,515) in view of Hofmann (WO 00/01099) as applied to claim 1 above, and further in view of Okawa et al (US 2003/0031195).

Regarding claim 2, the combination of Kanda and Hofmann disclose the communication system disclosed in paragraph 4. The combination does not disclose a pilot code is inserted into the transmitted signal for executing coherent detection. Okawa discloses a CDMA transmission method capable of improving the accuracy of channel estimation using pilot symbols and the pilot symbols, which are used for channel estimation for coherent detection, are inserted into coded information data on code channels at fixed intervals, and then the data is modulated by the modulator (abstract). This allows data to be recovered with fewer errors at the receiver. It would have been obvious for one of ordinary skill in the art at the time of the invention to utilize the teachings of Okawa in the combination of Kanda and Hofmann for the reasons stated above.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin M. Burd whose telephone number is (571) 272-3008. The examiner can normally be reached on Monday - Thursday 9 am - 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mohammad Ghayour can be reached on (571) 272-3021. The fax phone

Art Unit: 2631

number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Kevin M. Burd
4/11/2005

KEVIN BURD
PRIMARY EXAMINER